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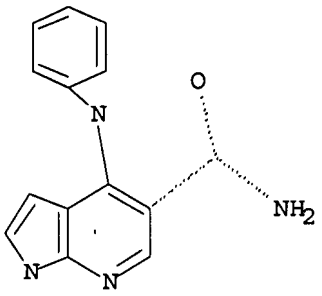

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L4 1 SEA FILE=CAPLUS L3

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L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:996178 CAPLUS
DOCUMENT NUMBER: 141:424170
TITLE: Azaindole compounds as Janus kinase 3 (JAK3 kinase) inhibitors, and their preparation, intermediates, and pharmaceutical compositions
INVENTOR(S): David, Laurent; Hansen, Peter
PATENT ASSIGNEE(S): Astrazeneca AB, Swed.
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2004099205	A1	20041118	WO 2004-SE696	20040506
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004236146	A1	20041118	AU 2004-236146	20040506
CA 2523922	A1	20041118	CA 2004-2523922	20040506
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
BR 2004010117	A	20060523	BR 2004-10117	20040506
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JP 2006525998	T	20061116	JP 2006-508046	20040506
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MX 2005PA12026	A	20060203	MX 2005-PA12026	20051108
US 2006287354	A1	20061221	US 2005-556227	20051109
PRIORITY APPLN. INFO.:			SE 2003-1372 A	20030509
			WO 2004-SE696 W	20040506

OTHER SOURCE(S): MARPAT 141:424170

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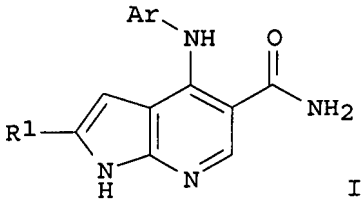

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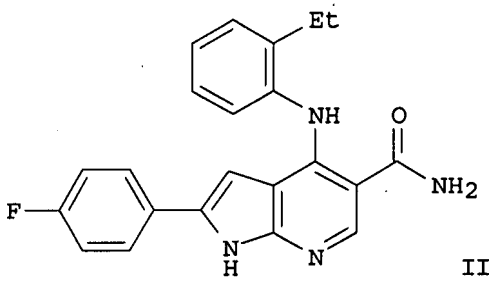

II

AB The invention relates to novel azaindole compds. I. which are kinase inhibitors, specifically of Janus kinase 3, also known as JAK3 kinase. The invention also relates to methods and intermediates for preparation of I, and pharmaceutical compns. comprising I. In compds. I, Ar is Ph which can be optionally substituted by one or more groups selected from halo, OH, cyano, C1-C8 alkyl (itself optionally substituted by one or more OH or cyano groups or F atoms), CH2R2, CH2O(CH2)nO(C1-6-alkyl), or (C1-C8-alkyl)NR3R4; R2 is a 5- to 7-membered saturated ring containing 1 or 2 N/O/S heteroatoms, an aryl or a 5- to 7-membered heteroaryl containing 1-3 N/O/S heteroatoms, all of these being optionally substituted by one or more OH or CH2OH groups; R3 is H or C1-6 alkyl; and R4 is C1-6 alkyl optionally substituted by one or more groups OH or Ph; n is 1-4; R1 is H or Ph optionally substituted by halo, C1-C8 alkoxy, C1-C8 thioalkyl, or C1-C8 alkyl; and pharmaceutically acceptable salts thereof. Nineteen compds. I were prepared, some as trifluoroacetate salts, and these same compds. are all claimed individually as the free bases. For instance, 6-amino-4-methoxynicotinic acid Me ester was subjected to a sequence of:

(1) electrophilic iodination in the 5-position, (2) alkyne coupling of the iodide with HC.tplbond.CC6H4F-4, (3) base-catalyzed cyclization of the alkyne adduct to give a pyrrolopyridine ring, (4) acidic saponification of the ester and demethylation of the methoxy group with HBr, (5) chlorination of the resultant hydroxy group and acid using POCl3, with ammonolysis of the acid chloride, and (6) amination of the ring chloride with 2-ethylaniline, to give invention compound II. In a JAK3 HTRF assay, the example compds. had IC50 values less than 25 μM.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 796032-56-9P, 4-[[2-Ethyl-3-(hydroxymethyl)phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(drug candidate; preparation of azaindole derivs. as JAK3 kinase inhibitors)

IT 796032-54-7P, 4-[(2-Ethylphenyl)amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-55-8P, 4-[[2-Ethyl-3-(hydroxymethyl)phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-57-0P, 4-[[2-Ethyl-3-[[(2-hydroxyethyl)amino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-58-1P, 4-[[2-Ethyl-3-[[(2-hydroxyethyl)amino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-60-5P, 4-[[2-Ethyl-3-[[(2-hydroxyethyl)(methyl)amino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-61-6P, 4-[[2-Ethyl-3-[[(2-hydroxy-1-methylethyl)amino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-62-7P, 4-[[2-Ethyl-3-[[(2-hydroxy-1-methylethyl)amino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-63-8P, 4-[[2-Ethyl-3-[[((S)-2-hydroxy-1-phenylethyl)amino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-64-9P, 4-[[2-Ethyl-3-[[((S)-2-hydroxy-1-phenylethyl)amino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-65-0P, 4-[[2-Ethyl-3-[[(2-hydroxy-2-phenylethyl)amino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-66-1P, 4-[[2-Ethyl-3-[[(2-hydroxy-2-phenylethyl)amino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-67-2P, 4-[[2-Ethyl-3-(morpholin-4-ylmethyl)phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-68-3P, 4-[[2-Ethyl-3-(morpholin-4-ylmethyl)phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-69-4P, 4-[[2-Ethyl-3-[(3-hydroxypyrrolidin-1-yl)methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-70-7P, 4-[[2-Ethyl-3-[(3-hydroxypyrrolidin-1-yl)methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-71-8P, 4-[[2-Ethyl-3-[[(R)-2-(hydroxymethyl)pyrrolidin-1-yl]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-72-9P, 4-[[2-Ethyl-3-[[(R)-2-(hydroxymethyl)pyrrolidin-1-yl]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-73-0P, 4-[[3-[[(2,3-Dihydroxypropyl)amino]methyl]-2-ethylphenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-74-1P, 4-[[3-[[(2,3-Dihydroxypropyl)amino]methyl]-2-ethylphenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-75-2P,

4-[[2-Ethyl-3-(imidazol-1-ylmethyl)phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-76-3P, 4-[[2-Ethyl-3-(imidazol-1-ylmethyl)phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-77-4P, 4-[[3-[(2-Ethoxyethoxy)methyl]-2-ethylphenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-78-5P, 2-(4-Bromophenyl)-4-[(2-ethylphenyl)amino]-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-79-6P, 4-[(2-Ethylphenyl)amino]-2-phenyl-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-80-9P, 4-[[2-Ethyl-3-(hydroxymethyl)phenyl]amino]-2-phenyl-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-81-0P, 4-[[2-Ethyl-3-(hydroxymethyl)phenyl]amino]-2-phenyl-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-82-1P, 2-(4-Chlorophenyl)-4-[[2-ethyl-3-(hydroxymethyl)phenyl]amino]-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-83-2P, 2-(4-Chlorophenyl)-4-[[2-ethyl-3-(hydroxymethyl)phenyl]amino]-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-84-3P, 2-(4-Chlorophenyl)-4-[[2-ethyl-3-[(imidazol-1-yl)methyl]phenyl]amino]-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-85-4P, 2-(4-Chlorophenyl)-4-[[2-ethyl-3-[(imidazol-1-yl)methyl]phenyl]amino]-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-86-5P, 4-[(2-Ethylphenyl)amino]-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-87-6P, 4-[[2-Ethyl-3-[[(2-hydroxyethyl)methylamino]methyl]phenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-93-4P, 4-[(2-Ethylphenyl)amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate 796032-94-5P, 4-[[3-[(2-Ethoxyethoxy)methyl]-2-ethylphenyl]amino]-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide trifluoroacetate
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of azaindole derivs. as JAK3 kinase inhibitors)

IT 796032-88-7P, 6-Amino-5-iodo-4-methoxynicotinic acid methyl ester 796032-89-8P, 6-Amino-5-[(4-fluorophenyl)ethynyl]-4-methoxynicotinic acid methyl ester 796032-90-1P, 2-(4-Fluorophenyl)-4-methoxy-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid methyl ester 796032-91-2P, 2-(4-Fluorophenyl)-4-hydroxy-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid 796032-92-3P, 4-Chloro-2-(4-fluorophenyl)-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796032-95-6P, 1-Benzyl-5-nitro-1H-pyrrole-2-carboxylic acid benzyl ester 796032-96-7P, 2-[[[1-Benzyl-5-[(benzyloxy)carbonyl]-1H-pyrrol-2-yl]amino]methylene]malonic acid diethyl ester 796032-97-8P, 2-[[(1-Benzyl-5-carboxy-1H-pyrrol-2-yl)amino]methylene]malonic acid diethyl ester 796032-98-9P, 1-Benzyl-4-hydroxy-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid ethyl ester 796032-99-0P, 1-Benzyl-4-chloro-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide 796033-00-6P, 1-Benzyl-4-chloro-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid 796033-01-7P, 1-Benzyl-4-[(2-ethylphenyl)amino]-1H-pyrrolo[2,3-b]pyridine-5-carboxylic acid amide
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of azaindole derivs. as JAK3 kinase inhibitors)

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